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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/667,105

09/18/2003

William L. MacIsaac

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CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER

TO, TOAN C

ART UNIT

PAPER NUMBER

3616

MAIL DATE

DELIVERY MODE

06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/667,105	Applicant(s) MACISAAC, WILLIAM L.	
	Examiner Toan C. To	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 89-183 and 187-189 is/are pending in the application.
- 4a) Of the above claim(s) 91-104, 110-115, 119-183 and 187 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 89, 90, 105, 116, 117, 188 and 189 is/are rejected.
- 7) ☒ Claim(s) 106-109 and 118 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12-1-2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 89, 90, 105, 116-117, and 188-189 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Der Knaap et al (U.S. 5,716,067).

Van Der Knaap discloses a vehicle suspension system for a vehicle having a body, the body having a pitch center and a roll center (17), the vehicle having at least one ground engaging vehicle support assembly (1), the vehicle having a reaction center (11), comprising: (a) at least one tie structure (3, 3', 5, 12, 13, 16) interposed between the vehicle support assembly (1) and the body (4) of the vehicle to serve as the path for the forces imposed on the vehicle that travel between the pitch or roll center and the support assembly, wherein the tie structure selected from the group consisting of: (i)-(v) as claimed; (b) a first interconnecting system (interconnecting relationship between the vehicle body 4, the wheel 1 and the linkage triangle 2) for interconnecting two or more of the: vehicle support assembly, the tie structure (3, 3', 5), and the body (4) so as to allow one of the pitch center, roll center and pitch and roll center, such center being located at an elevation above the reaction center (11) of the vehicle, to move on the direction of the forces that are imposed on the vehicle, thereby to preclude the

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applicable roll center, pitch center, or pitch and roll center from serving as the reaction center of the vehicle; (c) a second interconnecting system (interconnecting relationship between the push rod 14, horizontal rod 15, the spring 18 and the vehicle body) for interconnecting the tie structure (12, 13, 16) and the body about the pitch center or the roll center, both centers being located at elevations above the reaction center of the vehicle, whereby upon forces being imposed on the vehicle during operation of the vehicle, the body rotates around the center(s) of rotation relative to the tie structure, in the direction opposite to the direction of the forces acting on the vehicle in pitch or roll; and (d) a load control system (load control system as shown in figure 3) interposed and interconnecting the body (4), the vehicle support assembly (1) and/or the tie structure (3, 3', 5, 12, 13, 16), wherein the load control system generating a resistance to the movement of the pitch or roll center (17) which is greater than the resistance generated by the load control system to the movement of the center of gravity of the vehicle due to forces applied to the vehicle during operation of the vehicle.

As to claim 90, Van Der Knaap discloses a vehicle suspension system wherein the load control system having a dampening system (7) to dampen the movement of the pitch center, the roll center, the center of gravity, and the support assembly relative to the ground.

As to claim 105, Van Der Knaap discloses a vehicle suspension system, wherein the first interconnection system (interconnecting relationship between the vehicle body 4, the wheel 1 and the linkage triangle 2) interconnecting the tie structure (12, 13, 16) to the vehicle support assemblies (1) and also interconnecting the body (4) to the vehicle

support assemblies (1), wherein the first interconnection system is movable in the upright direction to enable the body (4) to move in at least one of the pitch and roll directions relative to the tie structure in the direction opposite to the direction of forces applied to the vehicle during cornering and braking.

As to claim 116-117, Van Der Knaap discloses a vehicle suspension system, wherein the second interconnection system comprising a plurality of pivot arm structures (2) interconnected between the body (4) and the tie structure (3, 3', 5), the pivot arm structures coupled to the tie structure (3, 3', 5) about a singular axis and the pivot arm structures coupled to the body about a single pivot axis, the pivot arm structures orientated relative to the body to be in alignment with a center of rotation of the body; wherein the pivot arm structures (2) coupled to the body and/or tie structure about two axes, the pitch axis and the roll axis of the body.

As to claim 188-189, Van Der Knaap discloses a vehicle suspension system, wherein the first interconnecting system comprises a resilient element (30), and the vehicle support assembly (1) is steerable vehicle support assembly (the wheel 1 is considered to correspond with a steerable support assembly as claimed).

Response to Arguments

3. Applicant's arguments filed February 12, 2007 have been fully considered but they are not persuasive. The prior art still read on the claimed limitations.

In response to applicant's arguments that in Van Der Knaap, the body 4 move in the same direction as the force being imposed on the vehicle, while the suspension as recited in claim 89, the body moves in the opposite direction of force; the examiner

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respectfully disagrees because when the reaction force F_D is exerted on the linkage triangle 2, the spring 18 produces a force F_v in opposite direction with the reaction force F_D and causes the body 4 to move in opposite direction with the reaction force F_D .

4. In response to applicant's that Van Der Knaap fails to teach that "the load control system generates a resistance to the movement of the pitch or roll center(s) which is greater than the resistance generated by the load control system to the movement of the center of gravity of the vehicle due to forces applied to the vehicle during operation of the vehicle", the examiner respectfully disagrees because the following reasons: the claims are rejected under 35 U.S.C 102, therefore, anticipation does not require that the prior art "teaching" what the application at issues teaches, but only that the claim at issue "read on" what is disclosed in the prior art. In this case, the recitation as mentioned above is considered a functional recitation, and the functional recitation of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the functional recitation, then it meets the claim. The anti pitch and roll control system of Van Der Knaap is considered to be capable of performing the functional recitation as claimed, because the resistance generated by the anti pitch and roll control system to the movement of the pitch and roll center(s) have to be greater than the resistance generated by the anti pitch and roll control system to the movement of the center of gravity in order to perform anti pitch or roll, otherwise it will cause the vehicle roll over or pitch.

Allowable Subject Matter

5. Claims 106-109, and 118 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan C. To whose telephone number is (571) 272-6677. The examiner can normally be reached on Mon-Fri (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TTO
May 22, 2007

 5/29/07
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600